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(54) **APPARATUS AND METHODS FOR SEALING
A VASCULAR PUNCTURE**

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See application file for complete search history.

(57) **ABSTRACT**

An apparatus for sealing a puncture through tissue having an introducer sheath therein includes an elongate positioning member including a housing on a proximal end and an expandable member on a distal end, and a cartridge advanceable along the positioning member from a proximal position to a distal position. The cartridge includes a tubular member including a sealant and an advancer member disposed within lumen of the tubular member. A sleeve is slidably disposed over the tubular member distal end such that, when the tubular member is advanced over the positioning member, the tubular member distal end enters the introducer sheath while the sleeve is stopped and slides over the tubular member to expose the tubular member distal end within the introducer sheath. The introducer sheath and cartridge are then withdrawn, exposing the sealant within the puncture.

26 Claims, 9 Drawing Sheets

